Scaling Science

Understandings and approaches for scaling research impact

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What is scaling science?
A play on words

<table>
<thead>
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<td>• Empirical understanding of scaling and how it can increase likelihood that innovations benefit society</td>
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<td>• Principles-based, practical approach to scaling impacts of research for the public good</td>
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Based on the work of Southern Innovators

- Review of ~150 research projects
- In-depth case studies
- Across a range of disciplines
The science of scaling: A principles-based approach

1. Justification
2. Optimal Scale
3. Coordination
4. Dynamic Evaluation

“Scaling impact is a coordinated effort to achieve a collection of impacts at optimal scale that is only undertaken if it is both morally justified and warranted by the dynamic evaluation of evidence.”
11 SCALING A NUTRITION INTERVENTION ON THE MARKET

Promoting locally fortified sunflower oil using e-vouchers

Increased health risks associated with diseases such as diabetes and cancers, the deficiency is particularly common in Tanzania and in response, the Government announced a strategy for increasing consumption of nutritious and healthy foods. Unrefined or crude vitamin A fortified sunflower oil has been unavailable in Tanzania until a lack of regulatory framework is addressed. The "Promoting Locally Fortified Sunflower Oil (Promoting LFO)" project worked with small and medium enterprises (SMEs) to demonstrate the viability of the sunflower oil production, distribution and regulatory framework for vitamin A enrichment process. The project also sought to improve the fortification process for the production of fortified sunflower oil in Tanzania. By selling the fortified sunflower oil on a small scale, the project's ultimate goal was to address the deficiency across Africa.

While still in its early stages, this project illustrates an important pathway for scaling development impact. A vitamin A deficiency at its core, this outcome is enabled by a specific development pathway that may achieve significant benefits through integration of micronutrient deficiencies. However, the project continues to face challenges in terms of regulatory requirements and constraints. For instance, while the project's target regions have a major requirement for fortified oil, the potential for scaling at a national level remains limited. It also demonstrates a pathway to scale that has not yet been taken, while still failing to achieve outcomes.

Deficiency and unrefined oil, which is essential for healthy adult health, continue to be underachieved at various levels. It is urgent to take adequate measures to ensure that all individuals receive adequate nutrition and health support.
1. Justification

→ The choice to scale must be justified

→ Based on a balance of evidence and values

→ Choice must be shared
→ Technical study showing shelf stability of fortified, unrefined oil

→ Addressing a widely identified health risk and complementing government policy

→ Clear local economic benefit
2. Optimal Scale

→ More is **not** necessarily better

→ Scaling produces a **collection of impacts**

→ Balance **magnitude**, **variety**, **equity**, **sustainability**
→ Increases in vitamin A levels in the target regions (magnitude)

→ Ability of enterprises to meet demand in the regions (variety)

→ Cost effectiveness of production (sustainability)

→ Assessment of benefits for lowest-income households (equity)
Scaling occurs in complex systems.

Requires a flexible scaling process.

Coordination connects an evolving set of actors.
Scaling is an intervention that can be evaluated

Generates dynamic change

Measure a collection of impacts, not just impact at a particular level or scale
Nutritional monitoring

Effectiveness of the commercial approach

Consideration of packaging and volumes
How to apply these principles in R4D?

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→ **Guidance** for researchers interested in scaling to incorporate these principles throughout a research project

→ **Continued learning** about scaling for impact through new applications and case studies
THANK-YOU